

REMARKS

This responds to the Office Action mailed on February 24, 2005.

Claims 1-26 and 30-32 are currently pending in this application.

§103 Rejection of the Claims

Claims 1-26 and 30-32 were rejected under 35 USC § 103(a) as being unpatentable over Chen et al. (U.S. Patent No. 6,756,294) in view of Brewer (U.S. 2004/0142575). Applicant respectfully traverses the rejection and requests the Office to consider the following.

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaack*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). (M.P.E.P. § 2143 8th Ed, Rev.1).

What is claimed includes the processes of "forming an imprinted polymer ... under conditions to expose a bond pad ... by local flow of the polymer ... ; mating a solder bump with the bond pad; and curing the polymer." (*E.G.*, claim 1).

The Office Action admits that Chen does not teach "forming an imprinted polymer upon the substrate under conditions to expose the bond pad on the substrate by local flow of the polymer ..." (Office Action at page 3). The Office action appeals to Brewer for the lack of this teaching. Brewer, however, is concerned with forming an assembly substrate template 210. And neither cited reference teaches or suggests a process of exposing a bond pad by local flow of the polymer. Further, Chen's polymer 12 is probably formed by etching and has nothing to do with local flow by imprinting. Further, Brewer's method even if it were a related technology, does not form any polymer by imprinting that exposes any surface. Rather, Brewer only forms a complementary shaped receptacle 221 that does not expose the assembly substrate 210. Further,

even if Brewer's method were to expose the assembly substrate 210, the assembly substrate 210 is a temporary structure that is discarded after it is used to mate an individual. And further, any bonding pads 741 mentioned by Brewer are remote and unrelated to any of the process of making the complementary shaped receptacle 221 by imprinting.

Because the process of Brewer has nothing to do with exposing any structures, let alone a bond pad, neither Brewer nor Chen teach or suggest any method of forming an imprinted polymer under conditions to expose a bond pad by local flow. Applicant respectfully asserts, therefore, that the motivation to combine the cited references only comes from using Applicant's disclosure as a guide. Withdrawal of the rejections is respectfully requested.

Because the combined references do not and cannot teach imprinting by local flow to expose a bond pad on a substrate, all the claims limitations are not taught in the cited references. Withdrawal of the rejections is respectfully requested.

Independent claim 17 teaches "placing a polymer film over a substrate ... ; imprinting the polymer film under conditions to expose a bond pad ... by local flow of the polymer film ... ; mating a solder bump with the bond pad; and curing the polymer film." As set forth above, neither Chen nor Brewer has anything to do with exposing any structures, let alone a bond pad, by forming an imprinted polymer under conditions to expose a bond pad by local flow. Applicant respectfully asserts, therefore, that the motivation to combine the cited references only comes from using Applicant's disclosure as a guide. Withdrawal of the rejections is respectfully requested.

Because the combined references do not and cannot teach imprinting a film and exposing a bond pad through the film by local flow, all the claims limitations are not taught in the cited references. Withdrawal of the rejections is respectfully requested.

Independent claim 30 teaches, among other limitations, of forming an imprinted polymer disposed upon a substrate under conditions to expose a bond pad on the substrate by local flow of the polymer ... ; [and] filling a solder flux into the recess" As set forth above, neither Chen nor Brewer has anything to do with exposing any structures, let alone a bond pad, by forming an imprinted polymer under conditions to expose a bond pad by local flow, followed by filling a solder flux into the recess that was caused by local flow of the polymer to expose a bond pad. Applicant respectfully asserts, therefore, that the motivation to combine the cited references

RESPONSE UNDER 37 C.F.R. 1.111

Serial Number: 10/815561

Filing Date: March 31, 2004

Title: EMBOSSED PROCESSES FOR SUBSTRATE IMPRINTING, STRUCTURES MADE THEREBY, AND POLYMERS USED THEREFOR

Assignee: Intel Corporation

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Dkt: 884.C15US1

only comes from using Applicant's disclosure as a guide. Withdrawal of the rejections is respectfully requested.

Because the combined references do not and cannot teach imprinting a film and exposing a bond pad through the film by local flow, all the claims limitations are not taught in the cited references. Withdrawal of the rejections is respectfully requested.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney, John Greaves at (801) 278-9171, or the below signed attorney to facilitate prosecution of this application. If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

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Respectfully submitted,
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Date April 25, 2005

By Ann M. McCrackin
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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: MS Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 25 day of April, 2005.

Dennis T. Kaph

Name

[Signature]
Signature